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THE MARITIME INDUSTRY: THE U.S. AND JAPAN

Summary

To many people shipping is an obscure and arcane world. Yet, with the bulk of U.S.-Japan merchandise trade moving on the ocean, the maritime industry is a significant aspect of bilateral relations. Both nations to some extent share the same problems in their domestic-flag carriers, and both exert a rather heavy government policy role on this industry. However, reliance on domestic-flag vessels has not declined in Japan as much as in the United States. This report investigates the structure and importance of the U.S. and Japanese shipping industries, government policies, and issues of current bilateral significance. Maritime affairs are of particular importance at the moment because of the possibility that Congress will enact new legislation this year affecting the U.S.-flag merchant fleet.

Introduction

Despite the rise of air cargo service, ocean shipping remains the dominant form of international freight transportation, not only for bulk raw materials but also for manufactured goods. Because maritime transportation is a relatively labor-intensive industry, however, and because of national differences in safety regulations and other standards, inspections and operating rules, vessel registry has shifted away from high-wage industrial countries. This trend has been noticeable for some time in the United States and more recently in Japan. But the maintenance of a domestic-flag merchant fleet has both national security justifications as well as powerful emotional attractions. As a result, both Japan and the United States have devised policies designed to protect and encourage the industry. While neither country has been completely successful in its policy goals, the proportion of trade borne by the U.S. domestic-flag fleet has declined far more drastically than it has in Japan.

Looking at the overall importance of ocean shipping to international trade, it can be seen that the United States is less dependent on this mode of transportation. For example, in 1960, 64 percent of U.S. exports and 76 percent of imports moved by vessel, but those percentages declined to 54 percent and 68 percent, respectively, by 1981. The U.S. position is affected by the existence of a land border with Canada (its largest trading partner) and the short distances to some of its major trading partners. In Japan, on the other hand, the absence of any land borders and isolation from the country's major trading partners mean that as of 1982, 92 percent of the value of exports and 90 percent of the value of imports still moved by ocean vessels. Even with the deterioration of the U.S.-flag feet's importance and the smaller proportion of goods moving by sea, the industry's services receipts are not an insignificant factor in the balance of payments. The importance of these earnings in both Japan and the United States is explored in greater detail below.

Maritime transportation consists of three different services — liner, irregular and tanker. Liner service provides scheduled sailings on regular routes and is largely organized into cartel-like groups called conferences. As will be detailed below, the U.S.-flag fleet is largely concentrated in liner service. Irregular service, or tramp service, includes all other dry cargo in which service is not on a regular basis. Tanker service is exactly what the name implies. Neither irregular nor tanker service is organized on a conference basis and in tanker and dry bulk traffic, the distinction between shipper and shipping company is blurred.

Maritime Trade Structure

The United States — Tables 1 and 2 show what has happened to the relative role of the U.S.-flag merchant fleet in the transportation of U.S. exports and imports. In 1981, only 3.6 percent of U.S. waterborne export tonnage and 5.3 percent of import tonnage moved on U.S.-flag vessels. In 1955, the export share was almost 18 percent and the import share was 26 percent. As with much other economic data, the relative strength of the United States in the 1950s was heavily affected by the war, which caused the rapid buildup of the U.S. merchant fleet and the destruction of others.

Despite the overall decline of the fleet, these tables demonstrate that the United States has had a relative strength in liner service. Even in 1981, the proportion of liner tonnage that was handled on U.S.-flag vessels was 26 percent; for imports the proportion was 29 percent. These proportions have also declined but not to the same extent as overall traffic. In 1955, 37 percent of liner exports and 40 percent of liner imports sailed on U.S. bottoms.

These data do not show Japan separately, but the picture for Japan and Korea together parallels the overall data. The proportion of total tonnage moving on U.S. bottoms is as small, and the United States has a much higher proportion of the liner traffic. In 1981, U.S.-flag liner-export tonnage to this region was 22 percent, and imports amounted to 21 percent. For liner traffic, the United States does capture a somewhat smaller share of the trans-Pacific business than of the Atlantic or Mediterranean markets, but the differences are small. Offsetting the relatively strong showing in liner transportation is the United States' miniscule role in the irregular market, or the tanker market. The U.S. decline has been steepest in export and import tonnages in these categories, ranging in 1981 from 1 to 4 percent.

The sharp drop in U.S.-flag tonnage is somewhat misleading, since a large portion of export and import tonnage moves on what are known as flags of convenience, or more

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technically, ships under "Effective United States Control" (EUSC). These are vessels owned by Americans, registered abroad and covered by government agreements to insure U.S. control in the event of a national emergency. If the tonnage of exports moving on EUSC vessels is added to that moving on U.S.-flag vessels, the proportion of exports under effective U.S. control or ownership would be 35 percent in 1978, and the proportion of imports an even higher 54 percent. However, the EUSC fleet remains a matter of controversy to officials involved in maritime policy.

Even so, ocean transportation provided the United States $2.2 billion in freight receipts for international transportation-related services in the balance-of-payments statistics in 1981, or 52 percent of total transportation receipts (with the rest coming from port fees and charter fees). On the other hand, the balance of payments also show freight payments of $5.7 billion, leaving the United States with a $3.0-billion deficit in the balance of ocean freight transportation. This performance is stronger than one would expect from the very small percentages of overall tonnage moving on U.S.-flag vesels and indicates the much higher revenue per ton associated with liner transportation than with the irregular dry cargo or tanker operations.

Japan — Data on Japan's waterborne trade are presented in Table 3. With the high growth of the Japanese economy, there has been a corresponding jump in waterborne tonnage — a 10-fold increase in export tonnage and a 12-fold increase in import tonnage between 1955 and 1981. Even in 1955, with a merchant marine that was still recovering from the war's destruction, 43 percent of the export tonnage and 52 percent of the import tonnage moved on Japanese-flag vessels. These proportions reached a peak around 1960 and since then have been in fairly steady decline. By 1981, only 21 percent of export tonnage and 37 percent of import tonnage moved on Japanese-flag vessels, indicating that the drop has been greater for exports than for imports.

Japan does not provide a statistical breakdown of traffic by type of service and flag of carrier, but the data do show the importance of bulk carriers in imports, with 48 percent of import tonnage moving in tankers, 50 percent in irregular service and only 2 percent on liners. Since Japan has no raw materials to export, the portion of export tonnage moving in liner service is a much higher 36 percent, with 59 percent in irregular service and only 5 percent in tankers.

As is the case in the United States, much of the decline in the role of Japanese-flag vessels is the result of a shift to flags of convenience. If the proportion of export tonnage moving on Japanese-controlled flags of convenience is added to that of the Japanese-flag fleet, the result is a much more constant 43-58 percent since 1955. In 1981 the proportion was 55 percent, virtually identical to what it was almost 30 years earlier. For imports, the addition of the flag-of-convenience tonnage raises the Japanese-controlled share of tonnage from around 50 percent in the 1950s to a peak of 76 percent in 1976, followed by a slow decline to 69 percent in 1981. Both the share of exports and imports moving under effective Japanese control are somewhat higher than is the case for the United States, but the difference is not as striking when the domestic-flag fleets alone are compared.

With a much larger share of exports moving on domestic-flag vessels, it is no surprise that Japan fares better in ocean transportation receipts and payments than the United States. Ocean shipping provided Japan with $9.0 billion in receipts in 1981 — $7.5 billion in freight receipts and another $1.3 billion in leasing receipts. This was more than triple the receipts earned by the United States. Japan also managed to maintain a small surplus on ocean shipping, since freight payments ($3.2 billion) and leasing payments ($5.3 billion) came to only $8.5 billion.

Industry Structure and Policy in the United States

In both the United States and Japan the structure of the domestic-flag industry is closely tied to government policy, which in turn is geared to benefit or support not only the shipping industry but the shipbuilding industry as well. In 1981, the U.S.-flag fleet in active foreign trade service consisted of 216 vessels, with a deadweight tonnage of 5.1 million tons. This compared to a much larger fleet of 601 vessels in 1955 that had a deadweight tonnage of 6.9 million tons. Counting ships in domestic service as well, the United States had the 8th-largest fleet in the world, while Japan was in third place (behind Liberia and Greece) with a domestic-flag fleet that had a deadweight tonnage that was more than twice the size of the U.S. fleet. The U.S. fleet is also rather elderly, with vessels averaging 23 years old in 1980, compared to Japan's seven-year-old ships. However, many of these unsubsidized U.S. vessels operate only in domestic service, and the subsidized vessels (in international service) average only 11 years old. Predictably, as the number of vessels has declined, employment in the U.S. maritime service has dropped — from 57,500 in 1955 to only 18,300 in 1981.

Government policy toward the domestic industry is centered in a series of subsidy programs under the direction of the Maritime Administration of the Department of Transportation. In addition, the Federal Maritime Commission is responsible for regulation of the maritime industry (including conference agreements, vessel certification, etc.). The subsidies have been of two basic kinds until recently — construction deficiency subsidies (CDS) and operating deficiency subsidies (ODS). However, the CDS program has been terminated by the Reagan administration. In addition, there are several other incentives and guarantees available to U.S.-flag companies:

1. When in operation, the construction deficiency subsidy was paid directly to the shipyards (rather than the U.S. shipping companies) and was intended to offset the difference between the cost of constructing a ship in the United States and abroad. The maximum percentage of the total U.S. construction cost that the government would pay has varied, but by the end of the 1970s it was 50 percent. The federal government presently shows $17 million in CDS outlays in the FY 1984 budget stemming from previous commitments.

2. The operating deficiency subsidy is intended to offset the difference between operating a U.S.-flag vessel (which is subject to a number of cost-increasing restrictions explained below) and a foreign-flag vessel. The items intended to be offset by the ODS include wages, insurance and repair costs. The FY 1984 federal budget shows a budget authority of $429 million for ODS.

3. The U.S. tax codes also allow a tax deferral for all U.S.-flag operators on funds set aside for construction or reconstruction in U.S. shipyards.

4. The Federal Ship Financing Fund provides federal guarantees for interest payments and principal on loans approved by the government. In the FY 1984 budget, the government is authorized to guarantee up to $600 million in new loans, bringing the total outstanding loans covered by the guarantees to $8.4 billion. The fund, it should be noted, is self-financed by insurance premiums, fees and interest income.

5. In addition, U.S.-flag operators benefit from government-generated cargoes. Traffic that results from shipments under the Agriculture Surplus Commodities Program, the Agency for International Development (AID) and the Department of Defense, or is financed by the Eximbank, as well as oil for the strategic reserve, is all subject to a requirement that a minimum percentage must travel on U.S.-flag vessels.

6. The federal government also provides a number of more minor benefits, including market development, port promotion, research and development, and maritime training, among others. The FY 1984 federal budget allocates $11.5 million in R&D funds and $71 million for training.

Aside from the fact that all U.S.-flag vessels use American crews, those carriers receiving this variety of government subsidies and benefits have a number of obligations:

1. Until the Reagan administration called a halt, all ships had to be built and repaired in the United States. This stipulation has now been scrapped along with the CDS.

2. Companies must operate on routes declared essential by the government and must maintain scheduled sailings (i.e. provide liner service).

3. Shipping firms cannot mix international and domestic business.

4. Companies must meet government-mandated capital reserve requirements for ship replacement.

As a result of the rather heavy obligations involved in receiving ODS, not all U.S.-flag carriers have chosen to participate and some have discontinued their participation (such as Sea-Land Service Inc. and United States Lines Inc.). At the end of the 1970s, 18 of the 189 companies operating U.S.-flag vessels received ODS for all or part of their fleets a total of 160 vessels. However, most of the non-ODS recipients are carriers in the domestic market where subsidization is not necessary since the Merchant Marine Act of 1920 (the "Jones Act") prohibits all foreign-flag vessels from U.S. domestic trade.

One of the current issues in U.S. maritime policy involves precisely this distinction between international transportation and domestic transportation. In 1970 the CDS program was altered to include tankers because of the serious decline of this type of U.S.-flag vessel. Accordingly, there was a spurt of tanker construction under subsidy for international service. But with the decline in oil imports reducing profits in the world tanker market, operators of these vessels now want to buy out their ODS contracts so that the vessels will be eligible to operate in the domestic Alaska oil trade. Operators of unsubsidized (and generally smaller, older, less efficient) tankers in domestic service currently handling Alaskan oil are opposed to allowing the buy-out of the contracts. This type of problem nicely illustrates the dilemmas and conflicts of interest resulting from the maze of government regulations and benefits intended to assist the U.S.-flag industry.

Concerned that current policy is not achieving its purpose, Congress is now considering several pieces of legislation. These include H.R. 1242, the Competitive Shipping and Shipbuilding Act of 1983, introduced by Congresswoman Lindy Boggs (D, Louisiana) and H.R. 2692, the Government-Impelled Cargo Act of 1983, both of which mandate a stronger preference for U.S.-flag vessels. The Boggs bill would mandate an annual increase in the proportion of bulk cargoes moving in U.S. bottoms until the 20-percent level is reached. H.R. 2693 would mandate a wider preference for U.S.-flag vessels in government shipments. Neither of these bills seems to have much chance of passage.

Another maritime reform bill, S. 47, would widen the antitrust exemption for U.S.-flag shipping companies participating in liner conferences and make some other changes in matters such as rate setting. This bill has passed the Senate and its companion, H.R. 1878, is under review in the House Judiciary Committee. This bill could well pass Congress this year and it has some relevance to bilateral issues discussed below.

Industry Structure and Policy in Japan

As noted earlier, Japan has managed to maintain one of the world's largest domestic-flag fleets, despite a drop in the proportion of traffic carried. The Japanese international shipping industry is dominated by seven large companies — Nippon Yusen (NYK), Japan Line, Sanko Steamship, Mitsui O.S.K. Lines, Yamashita-Shinnihon Steamship, Kawasaki Kisen and Showa Line. As a result of a government restructuring in the early 1960s, many of the other international shipping companies are now subsidiaries of one of these seven firms. Of this group, only Sanko Steamship is not a participant in the government subsidy programs.

Japan subsidizes shipbuilding through preferential financing from the Japan Development Bank (JDB) as well as through a direct interest-rate subsidy — both of which are aimed at the construction of new ships. These two programs were supplemented in the 1960s by a reorganization plan for the industry. The principal points of these three programs may be summarized as follows:

1. Each year the Ministry of Transportation establishes the limit for authorized (JDB-financed) shipbuilding. Companies ordering approved ships are eligible for JDB construction financing. In FY 1982, container ships and LNG carriers could be 60-percent financed through the JDB, with 30 percent commercial bank financing and 10 percent owner-financing. For all other types of ships, the ratios are 50 percent, 25 percent and 25 percent. The advantage of JDB financing is somewhat lower interest rates and more favorable repayment terms (a ten-year repayment period beginning three years after launching, compared to eight years, effective as of launching, for commercial loans).

2. Besides access to favorable loans, shipping companies receive from the government an interest-rate subsidy, both on loans from the JDB and on commercial bank loans. These subsidy payments peaked at ¥15.3 billion ($64 million at current exchange rates) in FY 1972. The subsidy program was temporarily halted in 1975 (when the steep recession dried up demand for new ships), but was resumed in 1979. In FY 1981 the subsidies amounted to ¥6.5 billion ($27 million). A total of 42 companies received these subsidies in 1981 — six of the seven large shipping companies plus 36 smaller companies.

3. In the early 1960s, during the heyday of high growth and government involvement in the economy, the government enacted a law that tied access to JDB loans and interest-rate subsidies to compliance with government guidance on industry consolidation. Companies that agreed to participate (the 42 companies receiving subsidies) were also allowed a one-time postponement of interest payments on loans from the JDB. For loans contracted prior to 1961, a five-year grace period was allowed on interest payments (unless corporate profits exceeded a 12-percent return on total assets). For loans from commercial banks, the postponement was conferred on one-half the interest payments.

In addition, domestic-flag vessels use Japanese crews and the coastal shipping industry is restricted to Japanese vessels. Another host of programs relates to promotion of efficiency in the coastal fleet, but these are not considered in this report. Compared to the size of the expenditures by the U.S. government, the Japanese subsidies seem small. Even at its height, the interest-rate subsidy was far below what the United States spent until recently in CDS, and still does in ODS. However, there are some important differences. The CDS program in the United States was designed to offset the

disadvantage of building ships in high-cost U.S. shipyards. By the late 1950s, Japanese shipyards were already the lowest-cost in the world, giving Japanese shipping companies an added advantage. Since there is no operating subsidy provided to Japanese ship owners, the subsidy on the cost of vessels in practice helps to make up for the higher cost of operating ships with Japanese crews. The fact that subsidization has not prevented a considerable shift to flags of convenience suggests that the rather modest subsidies no longer fully compensate for that operating cost disadvantage.

Another difference between the two countries is that maritime policy in Japan was not focused on the liner segment of the shipping market; its industry is not skewed in that direction. Further, the Japanese system may have encouraged continued replacement of older ships, since the subsidy ends when the loans mature. Statistics showing Japanese vessels by age show a very sharp drop in Japanese-flag vessels older than 13 years, a drop that is much steeper than one would expect from just the growth in the fleet's size over time.

Current Bilateral Issues

The main issue between the two countries concerns liner conferences on trans-Pacific routes. Japanese liner operators have for many years, in consultation with the Japanese government, operated a system of joint space chartering and pooling on their trans-Pacific services. This meant that one company could charter space for shipments on another company's vessel, a plan intended to reduce what the government regarded as excessive competition. These plans received approval from the Federal Maritime Commission in the 1960s. Japanese members of the various trans-Pacific conferences are also known to vote as a bloc on conference matters. Complaints about these practices were brought before the Federal Maritime Commission by four U.S.-flag carriers, and the commission is now reviewing its earlier approval. Behind these complaints lies the fact that with the prolonged world recession, foreign trade has slowed and shipping companies are facing an increasingly competitive market as they struggle to keep their vessels loaded.

For this reason, the space charters and pooling arrangements may break down. Earlier this year, Mitsui O.S.K. Line announced that it planned to terminate its participation in the agreements. In addition to grappling with that threat, government and industry officials are also alarmed at the legislation now pending before Congress (H.R. 1878) that would alter the conditions for rate-setting and antitrust exemption in a way that the Japanese feel will increase the competitive position of the U.S.-flag carriers on the trans-Pacific routes. One possibility that is currently being considered by the Ministry of Transportation and the six involved companies is ending the space charter system and replacing it with a grouping of the six companies into three two-company sets, but no final decision has yet been reached.

Not only have there been some problems within the conferences, but some carriers have opted to terminate their membership and operate independently. Companies in the Far East Conference, a group of liner companies operating from the Atlantic and Gulf ports of the United States and the Far East, have faced stiff competition from "minibridge" shipments -- freight moving by ship to West Coast ports and thence by rail to the East Coast. Since the conference has not had intermodal authority from the Federal Maritime Commission, several members have left the conference in order to better compete with the minibridge operators. This has now prompted the conference to file for intermodal authority with the FMC.

Yet another problem facing both countries is a new United Nations Code of Liner Conduct, produced by the United Nations Conference on Trade and Development

(UNCTAD). Under the proposed formula, cargo between pairs of countries would be subject to a 40-40-20 split: 40 percent each going to the shipping and receiving countries. The purpose of the code is to build the domestic-flag fleets of developing countries by giving them a guaranteed proportion of their own export and import trade. The Reagan administration has been opposed to this rule, while Japan as well as the European countries are prepared to accept it. The code is scheduled to go into force in October as more nations ratify it.

Conclusion

Maritime transportation remains a complex world of subsidies, cartels and strong national interests. Because the United States and Japan are high-wage countries, there has been a strong shift to flags of convenience, although the erosion has proceeded much further in the United States. Japan has done relatively better with less governmental presence; the subsidies have been lower and the requirements less restrictive.

Over the past decade, shipping companies worldwide have faced increased competition because of the slowed growth in merchandise trade and in transportation of bulk raw materials. This difficult market situation has meant that the cartel arrangements characterizing the liner portion of the industry are now coming unglued, and this process will continue to affect Japan and other U.S. trading partners over the next few years. If the new Maritime Act is passed this year, it will become another factor in the reshaping of the conferences.

The overall record of the maritime industry, despite occasional bilateral problems, is a good one. Even with the existence of cartels in the liner trade -- which economists normally view with misgivings -- competition in the industry shows every indication of being vigorous. In addition, technological change during the postwar period has been rapid -- bringing the creation of container ships, roll-on/roll-off vessels, enormous bulk carriers, automated equipment and more efficient engines, all of which have reduced transportation costs and furthered the expansion of trade.

For further information, contact Edward Lincoln.

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Table 1

U.S. Exports to Selected Overseas Regions by Type of Shipping Service

(in millions of tons)

Year and Region	Total		Liner		Irregular		Tanker	
	Tons	% U.S. Flag	Tons	% U.S. Flag	Tons	% U.S. Flag	Tons	% U.S. Flag
1955								
Total	87.9	17.9%	27.7	36.9%	51.0	9.1%	9.2	10.0%
Far East	12.5	23.4	3.8	44.3	6.8	17.8	1.8	0.8
Atlantic	42.8	11.0	10.6	28.8	26.6	5.0	3.6	5.6
Mediterranean	14.9	18.8	2.7	46.0	12.0	12.8	0.1	1.7
1965								
Total	143.0	11.0	30.9	24.6	91.5	5.0	20.6	16.9
Far East	34.3	4.3	6.2	19.7	25.1	1.0	3.0	0.3
Atlantic	48.0	2.9	8.8	11.3	31.0	1.2	8.2	0.2
Mediterranean	26.1	9.9	3.2	24.0	20.1	5.9	2.7	22.6
1981								
Total	364.9	3.6	36.2	25.9	270.7	1.0	57.9	2.0
Far East	108.6	1.6	7.0	22.1	92.9	0.1	8.8	0.5
Atlantic	109.4	2.4	7.3	26.5	72.6	0.6	29.5	1.0
Mediterranean	61.7	4.0	3.2	30.6	49.7	2.4	8.8	2.8

Definitions: Total -- Total U.S. waterborne exports excluding Canada
Far East -- Japan and Korea
Atlantic -- European ports on the Atlantic and Baltic plus the United Kingdom, Ireland, Iceland and Greenland
Mediterranean -- Mediterranean and Black Sea ports.

Source: Department of Commerce, FT 985: U.S. Waterborne Exports and General Imports

Table 2

U.S. Imports from Selected Overseas Regions by Type of Shipping Service

(in millions of tons)

Year and Region	Total		Liner		Irregular		Tanker	
	Tons	% U.S. Flag	Tons	% U.S. Flag	Tons	% U.S. Flag	Tons	% U.S. Flag
1955								
Total	119.5	25.9%	17.5	39.9%	29.3	22.1%	72.7	24.1%
Far East	0.8	38.9	0.7	40.7	0.1	23.7	0.0	0.0
Atlantic	7.1	16.7	4.3	23.7	2.4	2.9	0.4	21.4
Mediterranean	6.6	9.9	0.9	46.8	0.7	24.0	5.1	1.6
1965								
Total	213.6	5.4	21.3	21.3	60.3	2.9	131.9	3.9
Far East	7.0	8.3	4.3	13.4	2.5	0.4	0.0	0.0
Atlantic	11.9	6.9	7.1	11.1	4.2	0.2	0.5	3.8
Mediterranean	9.2	5.2	1.3	31.8	1.3	1.7	6.6	0.7
1981								
Total	422.2	5.3	28.2	28.9	72.9	1.1	321.2	4.2
Far East	18.2	6.4	5.4	21.4	11.5	0.0	1.3	1.7
Atlantic	37.7	7.7	8.2	29.8	8.3	0.6	21.2	2.0
Mediterranean	42.8	3.1	2.5	28.6	2.9	0.0	37.4	1.6

Source: see Table 1

Table 3

Japan's Waterborne Trade

(in millions of tons)

Year	Exports		Imports	
	Tons	% Japanese Flag	Tons	% Japanese Flag
1955	7.7	43.6%	36.7	52.1
1960	11.1	52.4	87.6	47.5
1965	23.4	37.6	119.4	43.5
1970	41.0	38.6	467.8	44.6
1975	61.1	23.3	554.6	45.6
1981	77.7	21.5	567.4	36.6

Source: Ministry of Transportation, Un'yu Keizai Tokei Yoran and Nihon Kaiji Koho Kyokai, '82 Suji de Miru Nihon no Kai'un Zosen